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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,619	10/22/2003	Shinnen Kobata	2003_1519	4810
513	7590	11/16/2006	EXAMINER	
WENDEROTH, LIND & PONACK, L.L.P. 2033 K STREET N. W. SUITE 800 WASHINGTON, DC 20006-1021			BLACKWELL, GWENDOLYN ANNETTE	
			ART UNIT	PAPER NUMBER
			1775	

DATE MAILED: 11/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/689,619

**Applicant(s)**

KOBATA ET AL.

**Examiner**

Gwendolyn Blackwell

**Art Unit**

1775

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 29,32-48 and 51-61 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 29,32-48 and 51-60 is/are allowed.
- 6) ☒ Claim(s) 61 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☒ Certified copies of the priority documents have been received in Application No. 10/088,919.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/06</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 26, 2006 has been entered.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

*(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.*

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claim 61 is rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent no. 6,387,516, Shichiri et al in view of United States Patent no. 5,830,568, Kondo.

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*Regarding claim 61*

Shichiri et al disclose an interlayer for laminated glass and a laminated glass containing the aforementioned interlayer, wherein the interlayer is comprised of a plasticized poly vinyl acetyl resin and a dispersant such as acetylacetone (chelating agent), sulfonic acid (sulfur compound), phosphoric acids (phosphate compound), 2-ethylbutyric acid/2-ethylhexylic acid (carboxyl group at its terminal position), (columns 9-10, lines 31-68); and a carboxyl modified silicon oils, (column 16, lines 36-50). Shichiri et al do not specifically disclose the inclusion of metal oxide particles.

Kondo discloses a laminated glass with an interlayer with metal oxide particles having a diameter ranging from 0.001  $\mu\text{m}$  – 0.2  $\mu\text{m}$ , (column 3, lines 10-19). The particles can be antimony doped tin oxide or tin doped indium oxide, (column 4, lines 13-55). Preferably, although not limited to, the interlayer is comprised of a polyvinyl butyral or an ethylene-vinyl acetate that can also contain a plasticizer, (column 3, lines 56-65). In addition, a bond-adjusting agent can be added to the interlayer, (columns 3-4, lines 65-4). The particles can be present in an amount in a range preferably from 0.5-5.0 wt% to with the rest being binder, resin and optionally other additives. In addition solvents can be added to the interlayer mixture, (column 7, lines 5-54).

Shichiri et al and Kondo disclose interlayer films used in glass laminates. While Shichiri et al do not disclose that particles can be added to the interlayer film, a concern of Shichiri et al is to improve the penetration resistance of the laminate as well as maintaining high transparency, aging resistance, and weatherability, (column 4, lines 54-63). As Shichiri et al and Kondo can both use polyvinyl resins for the interlayer material, it would have been obvious to one skilled in

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the art at the time of invention to modify the interlayer film of Shichiri et al with the particles of Kondo to create a glass laminate that exhibits extremely low haze, improved bond strength, and durability as well as imparting radio transmittance features to the laminated glass, (Kondo, column 2, lines 22-47).

***Allowable Subject Matter***

5. Claims 29, 32-48, and 51-60 are allowed over the prior art of record.

The closest prior art of record while teaching and/or suggesting an interlayer film for a laminated glass comprised of an adhesive resin containing a plasticizer, the oxide particles, the particle diameter and the dispersant does not teach or suggest the amount of dispersion of the oxide particles in the film with relation to the particle diameter in combination with other components of the interlayer film.

***Response to Arguments***

6. Applicant's arguments, see pages 7-10, filed April 27, 2006, with respect to claims 29, 32-48, and 51-60 have been fully considered and are persuasive in view of Applicant's claim amendments. The rejection of claims 29, 32-48, and 51-60 has been withdrawn.

7. With regards to claim 61, Applicant's contends that Shichiri et al (US 6,387,516) does not disclose or suggest that the ITO or ATO particles can be used with a specific dispersant such as acetylacetone.

This is not persuasive as there is nothing on the record to demonstrate that the particles of Kondo (US 5,830,568) could not be added to the interlayer of Shichiri et al in order to provide

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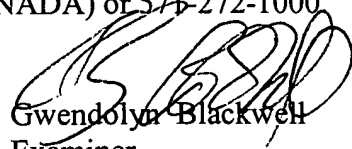
the interlayer with not only low haze, improved bond strength, and durability, but to also impart other features such as radio transmittance, (Kondo, column 2, lines 22-47).

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gwendolyn Blackwell whose telephone number is (571) 272-1533. The examiner can normally be reached on Monday - Thursday; 6:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on (571) 272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Gwendolyn Blackwell  
Examiner  
Art Unit 1775

gab